



Stratigraphic column adapted from:

Edwards, L.E., Bybell, L.M., Gohn, G.S., and Frederiksen, N.O., 1997, Paleontology and physical stratigraphy of the USGS-Pregnall No. 1 core (DOR-208), Dorchester County, South Carolina: U.S. Geological Survey Open-File Report 97-145, 35 p.

ABSTRACT

Pregnall No. 1, a 346-ft-deep corehole in northern Dorchester County, South Carolina, recovered sediments of late Paleocene, middle and late Eocene, and late Oligocene age. The core bottomed in the Chicora Member of the Williamsburg Formation (Black Mingo Group) of late Paleocene age (calcareous nannofossil Zones NP 7/8 (?) and NP 9). The Chicora (346 to 258 ft depth) consists of two contrasting lithologic units, a lower siliciclastic section of terrigenous sand, silt, and clay, and an upper carbonate section of moldic pelecypod limestone. The Chicora is overlain unconformably by the middle Eocene Moultrie Member of the Santee Limestone (Orangeburg Group). The Moultrie (258.0 to 189.4 ft) consists primarily of bryozoan-pelecypod-peloid packstones and grainstones, which are assigned to calcareous nannofossil Zone NP 16. Unconformably above the Moultrie are the locally shelly, microfossiliferous limestones of the Cross Member of the Santee Limestone (Orangeburg Group), which are assigned to middle Eocene Zone NP 17 and upper Eocene Zone NP 18. The Cross Member (189.4 to 90.9 ft) is unconformably overlain by a very thin, basal section of the upper Eocene Harleyville Formation (Cooper Group). The thin Harleyville section consists of fossiliferous limestone, primarily pelecypod-foraminifer-peloid packstones (90.9 to 85.8 ft), and is assigned to Zone NP 18, although samples from thicker Harleyville sections in the region typically are assigned to upper Eocene Zone NP 19/20. The Harleyville is overlain unconformably by the upper Oligocene Ashley Formation (Cooper Group). The Ashley Formation (85.8 to 30.0 ft) consists of a relatively homogeneous section of calcareous, microfossiliferous, silty and sandy clays assigned to Zones NP 24 and NP 25 (?). Neogene and (or) Quaternary deposits present in the upper 30 ft of the Pregnall section are assigned provisionally to an unnamed unit (30 to 22 ft) and to the Waccamaw Formation(?) (22 to 0 ft).